

CLAIMS

What is claimed is:

- 1 1. A modular multiple-mode gas-fueled assembly, comprising:
2 a base grate; and
3 a holder arranged to rest within the base grate, the holder comprising:
4 a hollow distribution frame having an inlet port and a plurality of outlet
5 ports, wherein each of the outlet ports are at the distal end of a respective upright
6 column forming part of the distribution frame; and
7 a plurality of support plates each having an aperture for contacting the
8 outer surface of a respective column of the distribution frame.

- 1 2. The assembly of claim 1, wherein the interior diameter of each
2 respective column of the hollow distribution frame is smaller than the interior
3 diameter of the inlet port.

- 1 3. The assembly of claim 1, wherein the exterior diameter of each
2 respective upright column forming part of the distribution frame is smaller at the
3 outlet port than at the end of the upright column closest to the inlet port.

- 1 4. The assembly of claim 1, further comprising a plurality of imitation
2 candles each having a passage along a major axis for encompassing a substantial
3 portion of a respective upright column.

- 1 5. The assembly of claim 1, wherein the distribution frame comprises a
2 plurality of appendages and the base grate comprises receiving depressions for
3 receiving each respective appendage.

- 1 6. The assembly of claim 1, wherein the distribution frame comprises a
2 plurality of compression fasteners arranged to engage the base grate.

- 1 7. The assembly of claim 1, wherein each of the respective columns
2 comprises a fuel distribution plate proximal to the outlet port.

1 8. The assembly of claim 7, wherein the fuel distribution plate comprises
2 a plurality of spatially arranged openings.

1 9. The assembly of claim 7, wherein each respective column comprises a
2 flame distributor.

1 10. The assembly of claim 1, further comprising:
2 a gas valve coupled to the inlet port, the gas valve responsive to a solenoid
3 electrically coupled to a control circuit.

1 11. The assembly of claim 10, wherein the control circuit comprises a
2 plurality of sensors arranged in close proximity to each respective outlet port.

1 12. The assembly of claim 11, wherein the control circuit closes the gas
2 valve when one of the sensors indicates that a flame is not present at an outlet port.

1 13. The assembly of claim 12, wherein the control circuit comprises an
2 override-to-light switch, wherein when the switch is closed the gas valve remains
3 open regardless of the absence of a flame as indicated by the sensor at an outlet.

1 14. The assembly of claim 10, wherein the control circuit converts light
2 energy into electrical energy when a flame is present and converts heat energy into
3 electrical energy to energize the solenoid.

1 15. The assembly of claim 1, wherein the hollow distribution frame is
2 configured with a coupler configured to engage a connector of a gas supply.

1 16. A modular multiple-mode gas-fueled assembly, comprising:
 2 a base grate comprising:
 3 a plurality of support members each having a first end suited for
 4 contacting the floor of a fire box and an upper end; and
 5 a frame coupled to the upper end of the support members;
 6 a holder arranged to rest within the base grate, the holder comprising a
 7 plurality of longitudinally spaced, transversely disposed cradle members coupled to a
 8 hollow distribution frame, the hollow distribution frame having an inlet port and a
 9 plurality of outlet ports; and
 10 a coupler configured to engage a gas supply.

1 17. The assembly of claim 16, wherein the holder comprises a plurality of
 2 appendages and the base grate comprises a plurality of receiving depressions for
 3 receiving each respective appendage.

1 18. The assembly of claim 16, wherein the holder comprises a plurality of
 2 compression fasteners arranged to engage the base grate.

1 19. The assembly of claim 16, further comprising:
 2 imitation logs arranged to rest on the holder, the imitation logs further
 3 arranged to define a void for substantially encompassing the hollow distribution
 4 frame.

1 20. The assembly of claim 16, further comprising:
 2 a gas valve coupled to the inlet port, the gas valve responsive to a solenoid
 3 electrically coupled to a control circuit.

1 21. The assembly of claim 20, wherein the control circuit comprises a
 2 plurality of sensors arranged in close proximity to each respective outlet port.

1 22. The assembly of claim 21, wherein the control circuit closes the gas
 2 valve when one of the sensors indicates that a flame is not present at an outlet port.

1 23. The assembly of claim 20, wherein the control circuit comprises an
2 override-to-light switch, wherein when the switch is closed the gas valve remains
3 open regardless of the absence of a flame as indicated by the sensor at an outlet.

1 24. The assembly of claim 20, wherein the control circuit converts light
2 energy into electrical energy when a flame is present and converts heat energy into
3 electrical energy to energize the solenoid.

1 25. A method, comprising:
2 providing a support structure for a gas-fueled holder, the gas-fueled holder
3 having an inlet port and a plurality of outlet ports;
4 mounting the gas-fueled holder to the support structure;
5 coupling the gas-fueled holder to a gas supply;
6 providing a flammable gas at the inlet port; and
7 introducing an ignition means at an outlet of the gas-fueled holder.

1 26. The method of claim 25, further comprising substantially surrounding
2 each of the outlet ports with an imitation candle.

1 27. The method of claim 25, further comprising substantially surrounding
2 each of the outlet ports with an imitation log.

1 28. The method of claim 25, further comprising:
2 determining whether a flame is burning at each of the outlet ports; and
3 controllably prohibiting the flow of flammable gas into the inlet port when a
4 flame is not burning at each of the outlet ports.

1 29. The method of claim 28, wherein determining whether a flame is
2 burning at each of the outlet ports comprises converting light energy into electrical
3 energy and controllably prohibiting the flow of flammable gas into the inlet port
4 comprises converting heat energy into electrical energy.

1 30. A holder, comprising:
2 a hollow distribution frame having an inlet port and a plurality of outlet ports,
3 wherein each of the outlet ports are at the distal end of a respective upright column
4 extending from the distribution frame; and
5 a plurality of support plates each having an aperture for contacting the outer
6 surface of a respective column of the distribution frame.

1 31. The holder of claim 30, wherein the interior diameter of each
2 respective column of the hollow distribution frame is smaller than the interior
3 diameter of the hollow distribution frame at the inlet port.

1 32. The holder of claim 30, wherein the exterior diameter of each
2 respective upright column extending from the distribution frame is smaller at the
3 outlet port than where the upright column is attached to the distribution frame.

1 33. The holder of claim 30, further comprising a plurality of imitation
2 candles each having a passage along a major axis for encompassing a substantial
3 portion of a respective column of the distribution frame.

1 34. The holder of claim 30, wherein each of the respective columns
2 comprises a fuel distribution plate proximal to the outlet port.

1 35. The holder of claim 34, wherein the fuel distribution plate comprises a
2 plurality of spatially arranged openings.

1 36. The holder of claim 35, wherein each respective column comprises a
2 flame distributor.

1 37. The holder of claim 30, further comprising:
2 a gas valve coupled to the inlet port, the gas valve responsive to a control
3 circuit electrically coupled to the gas valve.

1 38. The holder of claim 37, wherein the control circuit comprises a
2 plurality of sensors arranged in close proximity to each respective outlet port.

1 39. The holder of claim 38, wherein the control circuit closes the gas valve
2 when one of the sensors indicates that a flame is not present at an outlet port.

1 40. The holder of claim 39, wherein the control circuit comprises an
2 override-to-light switch, wherein when the switch is closed the gas valve remains
3 open regardless of the absence of a flame as indicated by a sensor at an outlet.

1 41. The holder of claim 30, wherein the hollow distribution frame is
2 configured with a coupler configured to engage a connector of a gas supply.

1 42. A method, comprising:
2 providing a gas-fueled holder having an inlet port and a plurality of outlet
3 ports;
4 coupling the gas-fueled holder to a gas supply;
5 providing a flammable gas at the inlet port;
6 substantially surrounding each of the outlet ports with an imitation fuel; and
7 introducing an ignition means at an outlet of the gas-fueled holder.

1 43. The method of claim 42, wherein substantially surrounding each of the
2 outlet ports comprises substantially surrounding each of the outlet ports with an
3 imitation candle.

1 44. The method of claim 42, wherein substantially surrounding each of the
2 outlet ports comprises substantially surrounding each of the outlet ports of the gas-
3 fueled holder with imitation logs.

1 45. The method of claim 42, further comprising:
2 determining whether a flame is burning at each of the outlet ports; and
3 controllably prohibiting the flow of flammable gas into the inlet port when a
4 flame is not burning at each of the outlet ports.

1 46. The method of claim 45, wherein determining whether a flame is
2 burning at each of the outlet ports comprises converting light energy into electrical
3 energy and controllably prohibiting the flow of flammable gas into the inlet port
4 comprises converting heat energy into electrical energy.

1 47. A circuit comprising:
2 a power transistor having an emitter, a base, and a collector; ✓
3 a solenoid coupled to the collector;
4 a plurality of thermocouples coupled between the solenoid and the emitter;
5 and
6 a plurality of photo-sensitive transistors coupled in series between the
7 collector and the base.